



## 2500A225B

- 2500 Watts CW
- 10kHz–225MHz
- Class A
- Portable
- Full VSWR-tolerant
- CE & RoHS Compliant

### Features

The Model 2500A225B is a solid-state, self-contained, broadband amplifier designed for applications where instantaneous bandwidth, high gain and linearity are required. The amplifier is air-cooled using internal self-contained liquid cooling for high performance and reliability. A stylish, contemporary enclosure allows for easy portability.

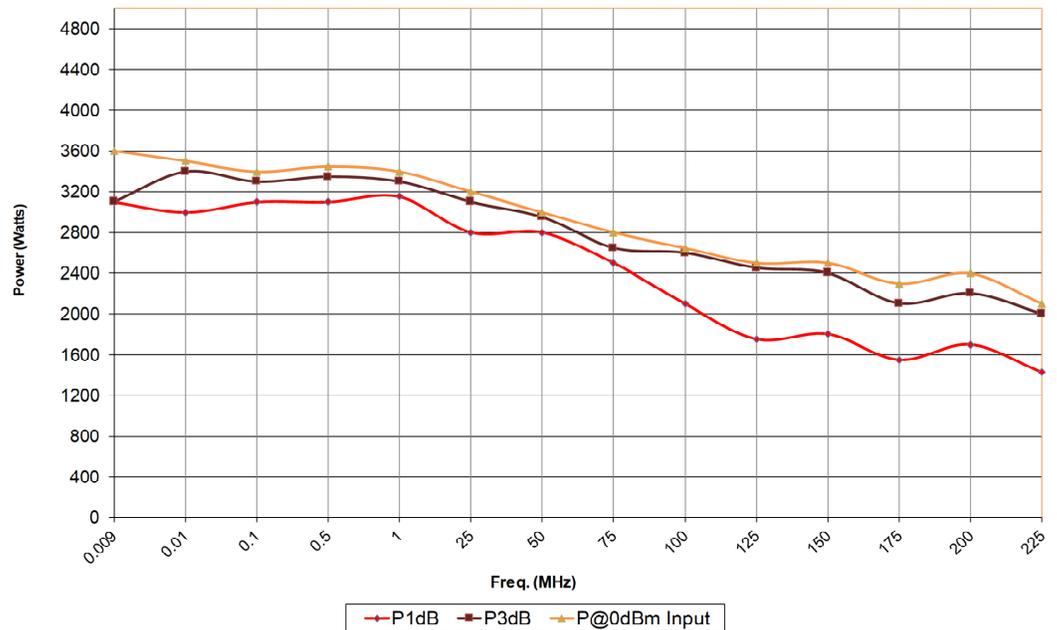
The Model 2500A225B, when used with a sweep generator, will provide a minimum of 2500 watts of RF power. Included is a front panel gain control which permits the operator to conveniently set the desired output level. The 2500A225B is protected from RF input overdrive by an RF input leveling circuit which controls the RF input level to the RF amplifier first stage when the RF input level is increased above 0dBm. The RF amplifier stages are protected from over-temperature by removing the DC voltage to them if an over-temperature condition occurs due to cooling blockage or fan failure. The Model 2500A225B is equipped with a Digital Control Panel (DCP) which provides both local and remote control

of the amplifier. The DCP uses a color LCD touch screen display to indicate the operate status and fault conditions if an over-temperature or power supply fault has occurred. The unit can be returned to operate when the condition has been cleared.

All amplifier control functions and status indications are available remotely through the included Remotes Package. The Remotes Package includes GPIB/IEEE-488 format, RS-232 hardware and fiber optic, USB, and Ethernet. The bus interface connector is located on the back panel and positive control of local or remote operation is assured by a Local/Remote keyswitch on the front panel of the amplifier. Also included with the Remotes Package is a safety interlock circuit for use with external safety switch interlocks. This circuit prevents the amplifier from going into operate mode unless the external connection is made. A jumper plug is provided for cases where this functionality is not needed.

The export classification for this equipment is EAR99.

2500A225B Typical Output Power



AR RF/Microwave  
Instrumentation  
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Souderton, PA 18964  
215-723-8181

For an applications engineer call: 800.933.8181

www.arworld.us

ISO 9001 Certified



## Specifications

# 2500A225B

- 2500 Watts CW
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### RATED OUTPUT POWER:

Typical: 2800 watts, min 2500 watts, .01-100MHz  
 Typical: 2300 watts, min 2000 watts, 100-225MHz

**INPUT FOR RATED OUTPUT:** 1.0 mW Max

### POWER OUTPUT @ 3dB COMPRESSION:

Typical: 2800 watts, min 2500 watts, .01-100MHz  
 Typical: 2300 watts, min 2000 watts, 100-200MHz  
 Typical: 2000 watts, min 1800 watts, 200-225MHz

### POWER OUTPUT @ 1dB COMPRESSION:

Typical: 2400 watts, min 2000 watts, .01-100MHz  
 Typical: 1900 watts, min 1500 watts, 100-200MHz  
 Typical: 1500 watts, min 1300 watts, 200-225MHz

**FLATNESS:** ±2.0 dB typical, ±2.5 dB maximum

**FREQUENCY RESPONSE:** 10kHz-225 MHz instantaneously

**GAIN (at maximum setting):** 64 dB minimum

**GAIN ADJUSTMENT (Continuous Range):** 20 dB

**INPUT IMPEDANCE:** 50 ohms, VSWR 1.5:1 maximum

**OUTPUT IMPEDANCE:** 50 ohms nominal

**MISMATCH TOLERANCE:** Will operate without damage or oscillation when connected to any load impedance without the aid of foldback circuitry.

**MODULATION CAPABILITY:** Will faithfully reproduce AM, FM, or Pulse modulation appearing on input signal.

**THIRD ORDER INTERCEPT:** 74 dBm typical

**NOISE FIGURE:** 7.0 dB typical

**HARMONIC DISTORTION:** Minus 30 dBc typical, minus 20 dBc maximum at 1750 watts

**SPURIOUS:** Minus 70 dBc typical

**PRIMARY POWER (User must specify):** 200-240 VAC or 380-415 VAC, 3-phase, 50/60Hz, 8.5 kWatts

### CONNECTORS:

RF Input: N female  
 RF Output: 7/16 DIN female  
 Sample Ports: N female

### REMOTES PACKAGE:

IEEE-488: 24-pin female  
 RS-232: 9-pin subminiature D (female)  
 Fiber optic: ST Conn Tx and Rx RS-232  
 USB 2.0: Type B  
 Ethernet: RJ-45  
 Safety Interlock: 15-pin subminiature D

**COOLING:** Forced air, internal self-contained liquid

**WEIGHT:** 159 kg (350 lbs)

**SIZE (W x H x D):** 56.1 x 132.1 x 82.4 cm (22.1 x 52 x 32.5 in)

### ENVIRONMENTAL:

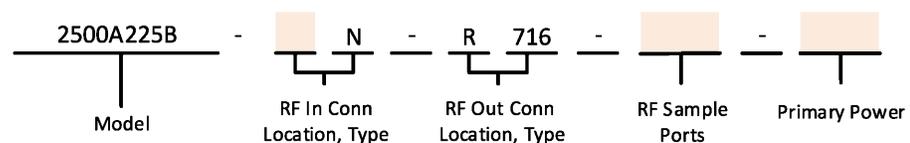
Operating Temperature: 5°C / +40°C  
 Operating Altitude: Up to 2000M  
 Shock and vibration: Normal Truck Transport

### REGULATORY COMPLIANCE:

EMC EN 61326-1  
 Safety UL 61010-1  
 CAN/CSA C22.2 #61010-1  
 CENELEC EN 61010-1  
 RoHS DIRECTIVE 2011/65/EU

**EXPORT CLASSIFICATION:** EAR99

## Ordering Options

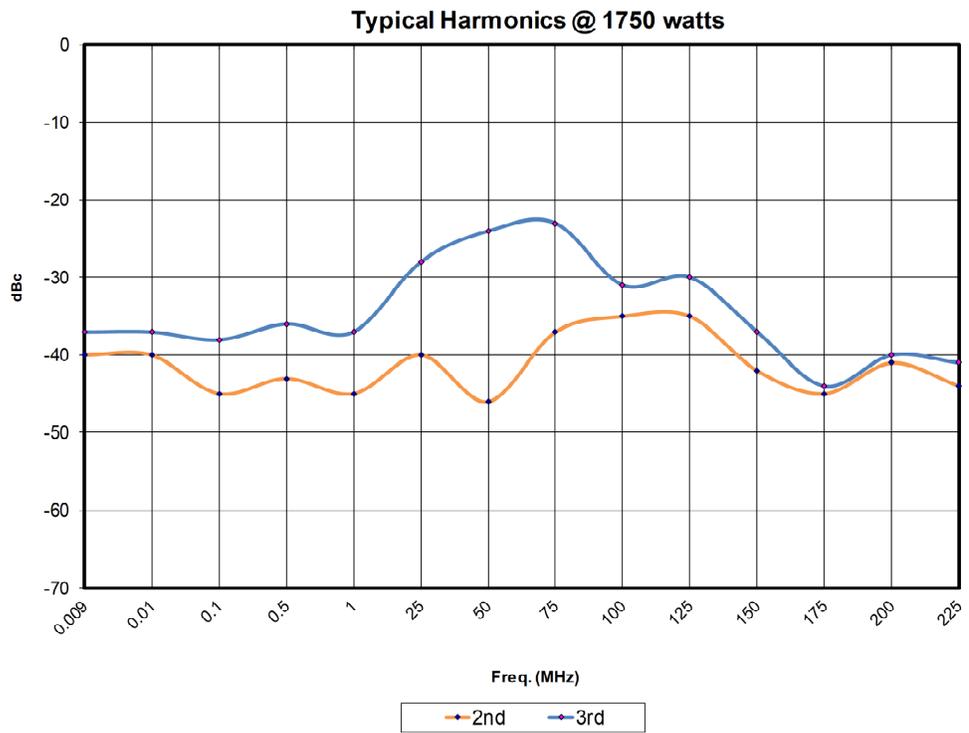
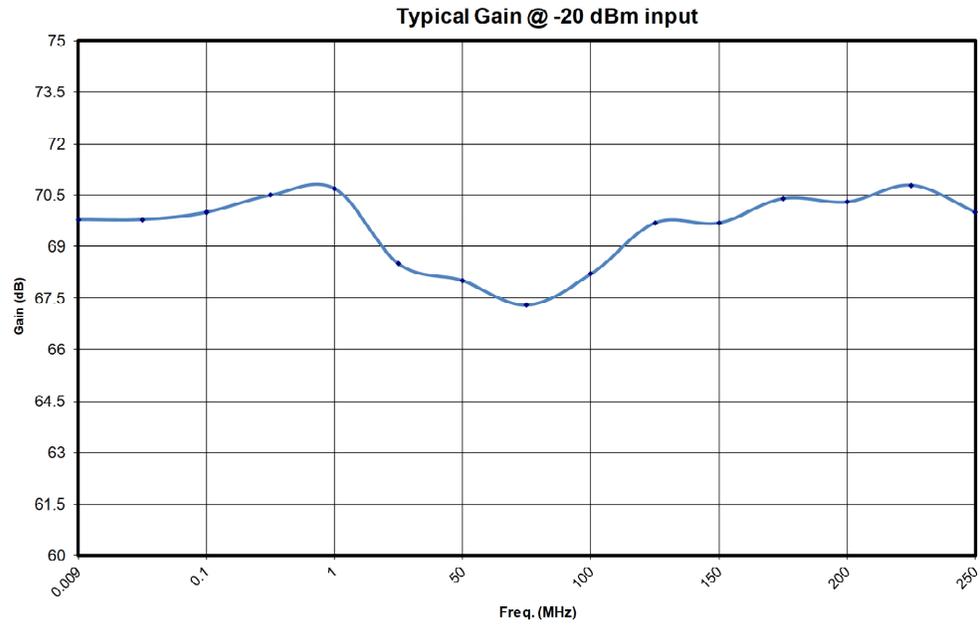


CONNECTOR LOCATION		RF SAMPLE PORTS		PRIMARY POWER	
Front	F	RF Sample Ports Front	SPF	200-240 VAC	LV
Rear	R	RF Sample Ports Rear	SPR	380-415 VAC	HV

Contact your AR RF/Microwave Instrumentation Sales Associate for specific model configuration pricing.

# 2500A225B

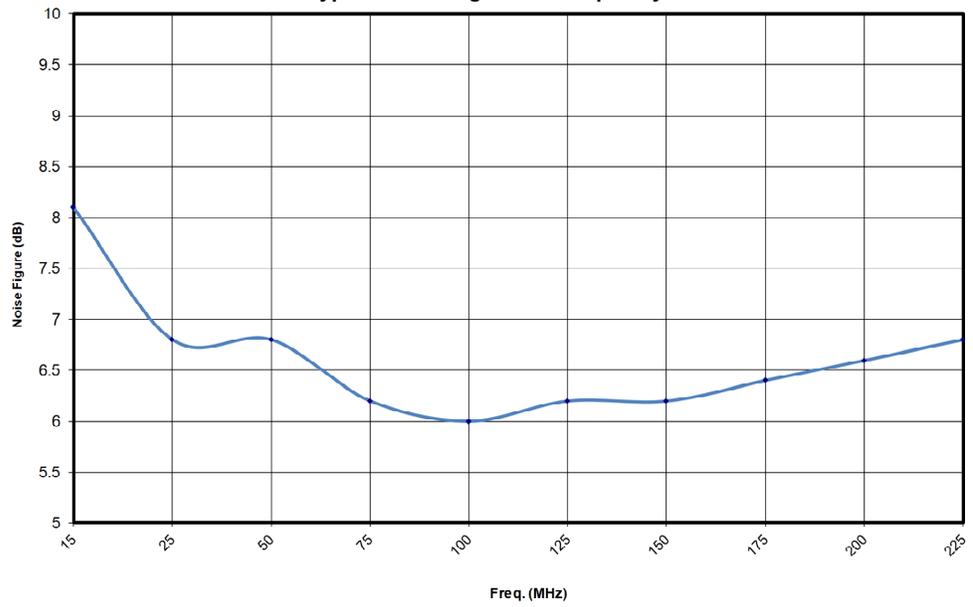
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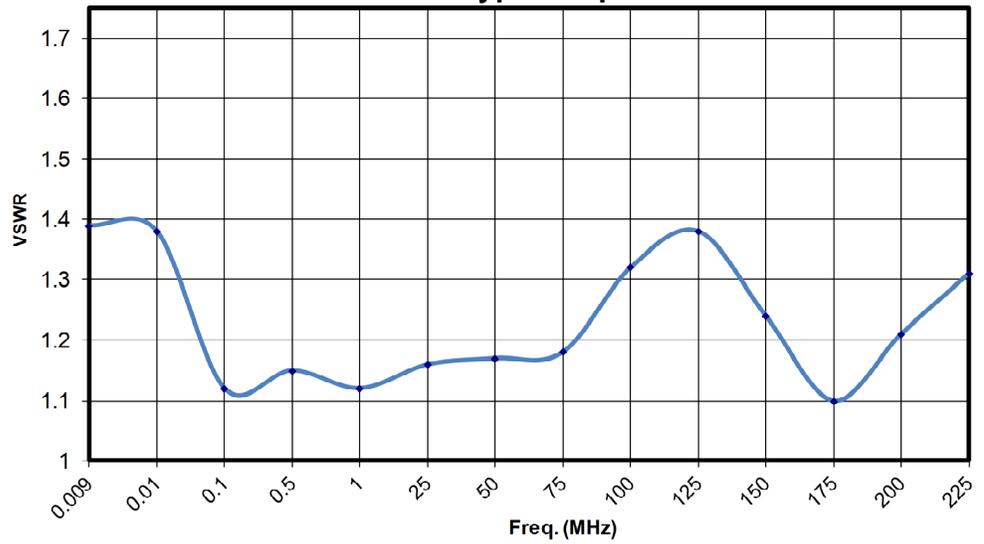
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Typical Noise Figure vs. Frequency



Typical Input VSWR



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